



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
OREGON OPERATIONS OFFICE
805 SW Broadway, Suite 500
Portland, Oregon 97205

October 30, 2014

Mr. Dave Lacey
Oregon Department of Environmental Quality
Northwest Region Office
2020 SW 4th Avenue, Suite 400
Portland, Oregon 97201

Dear Mr. Lacey:

The Environmental Protection Agency has completed its review of the subject report. For your consideration and use, we have enclosed the technical review comments prepared by the EPA's contractor, CDM Smith.

The EPA's review and subsequent comments are focused on the need for more outfalls to be considered as potential sources for control measures and on clarifying needs to fully assess Vigor's future plans. The EPA and CDM Smith are available to meet with you at your convenience to discuss these review comments.

Please feel free to contact me at 503-326-6554 or muza.richard@epa.gov with any questions about the EPA's review of the Storm Water Data Gaps Investigation and Site-Wide Conceptual Design Update Report for Vigor Industries, LLC.

Sincerely,

A handwritten signature in black ink that reads "Rich Muza".

Rich Muza
Remedial Project Manager

Enclosure

Review Comments
Storm Water Data Gaps Investigation and Site-Wide Conceptual Design Update Report
Dated September, 2014

DGI & Conceptual Design Update Report

General Comments

1. The exclusion of Outfall P is premature. The latest storm water samples taken at Outfall P were not taken early enough during the monitored storm events to qualify as a first flush event. As such, contaminant concentrations may be higher than those detected in the latest storm water sample events. More first flush sampling is needed before determining whether or not Outfall P can be excluded from source control measures.
2. Outfalls E and N, as well as their representative outfalls as described in Table 1, should be included in the list of outfalls requiring source control for cadmium. As indicated in Table 3, these two outfalls have a geometric mean for cadmium that exceed typical Portland Harbor industrial site storm water concentrations per the DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites (2010).
3. Outfall E, as well as its representative outfalls described in Table 1, should be included in the list of outfalls requiring source control for Bis(2-ethylhexyl)phthalate (BEHP). As indicated in Table 3, this outfall has a geometric mean that exceeds typical Portland Harbor industrial site storm water concentrations for BEHP per the DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites (2010).
4. A design storm event of 1.25 inches in 24 hours is used based on Oregon Department of Transportation storm water guidance. The EPA submitted previous comments on January 25, 2013 regarding the bio-infiltration pond design sizing analysis (ERM 2013). The EPA noted that storm water runoff from the Vigor Industrial Site presents a higher risk than typical highway facility runoff because it contains known contaminant concentrations in excess of NPDES Tier II requirements, which would be discharged directly into the river and have the potential to recontaminate remedial cleanup. The 2013 analysis indicated that using the ODOT design storm would result in an average of eight annual bypass events and an annual overflow volume of 1.2MG. The EPA's previous specific comments on the design analysis still stand.

Specific Comments

1. Page 4, Section 2.1 & Figure 3 -- Several of the current facility map items referenced in Figure 3 are missing, not labeled or not called out in the legend, including catch basins and drainage patterns and storm water discharge monitoring stations. It is recommended that these issues be addressed.
2. Page 5, Section 2.2 -- The first sentence of the third paragraph describes the "barge building and the Ballast Water Treatment Plant (BWTP) area"; however, these areas are not clearly shown in the referenced Figure 3. Other pertinent items, including catch basin locations and the layout of underground piping, are missing, not labeled or not called out in the legend in Figure 3. It is recommended that the figures be revised to indicate where these areas are located.
3. Page 5, Section 2.2 -- In the last sentence of the third paragraph, "Figure 3" should be called out as "Figure 2". It is recommended that this discrepancy be addressed.
4. Page 5, Section 2.2 -- The first sentence of the fourth paragraph describes the "Laydown areas 1 through 7"; however, these areas are not clearly shown in the provided figures. It is recommended that the figures be revised to indicate where these areas are located.

5. Page 7, Section 2.3.1 -- The section is titled "Tier I Corrective Action Requirements"; however, the content describes the Tier II corrective actions. It is recommended that this discrepancy be addressed.
6. Page 12, Section 2.5 -- It is stated that "Vigor notes the storm water from the main parking lot is not considered to be associated with industrial activities..." A cursory inspection of aerial imagery ([Google Earth, 2014](#)) indicates that stockpiling of materials, both covered and uncovered, occurs within this area. Therefore, it is recommended that runoff Outfall P be included in the Source Control Actions.
7. Page 13, Section 2.6.2 -- It is recommended that clear information as to the how the EC removes contaminants from the storm water be included here. The application of EC as a batch process mode using the BWTP surplus tanks for equalization should be described in detail. The analysis should also consider worst case scenarios when there may be reduced or inadequate storage capacity for storm water treatment resulting in overflows or bypasses. Information should include whether or not more chemicals are added to the treatment process and what contaminants are targeted for removal. An explanation as to why some contaminants, such as PCBs and some pesticides, increase in concentration should also be included. It is recommended that this information be added here.
8. Page 21, Section 4.1.1.1 -- It is noted for aluminum that "individual exceedances of the SLV were general[ly] less than 10"; however, most samples have exceeded the SLV as shown in the tables. In addition, the geometric means shown in Table 3 exceed the SLV for aluminum for the most of the outfalls. It is recommended that consideration be given to adding aluminum to the list of monitored metals.
9. Page 21 & 22, Section 4.1.1.3 -- As indicated in Table 3, the geometric mean for cadmium at Outfalls E and N exceed typical Portland Harbor industrial site storm water concentrations per the DEQ Guidance for Evaluating the Stormwater Pathway at Upland Sites (2010). Cadmium is retained as a contaminant requiring source control for only Outfall Q and the representative Outfalls M and O. Based on the data shown in Table 3, it is recommended that the list of outfalls include Outfalls E and N and their associated representative outfalls as described in Table 1.
10. Page 26, Section 4.1.6 -- As indicated in Table 3, the geometric mean for BEHP at Outfall E exceeds typical Portland Harbor industrial site storm water concentrations. BEHP is retained as a contaminant requiring source control for only Outfalls G, L, LD1-B, Q and S1. Based on the data shown in Table 3, it is recommended that the list of outfalls include Outfall E and its associated representative outfalls as described in Table 1.
11. Page 27, Section 4.1.8 & Page 38, Section 6.0 -- None of the samples taken at Outfall P were taken within 30 minutes of storm water discharge, or first flush events, as shown in Appendix C. In addition, arsenic was detected at exceedance quotients of 50.67 and 28.99 as presented in Table 4 for the January and June 2014 sampling events, respectively. These high concentrations could indicate the need for source control at the site. It is recommended that at least two first flush events be collected at Outfall P before determining if Outfall P be excluded from requiring source control.
12. Page 30, Section 4.3 -- The analysis of EC performance is inadequately described. The report states that direct comparison of influent and effluent samples is not applicable. The report goes on to state that "arithmetic mean of influent and effluent [concentrations?] were compared." It is recommended that this analysis, which provides the basis for the performance of the EC pilot system, be documented in the report.
13. Page 32, Section 5.1 -- It is stated that "A proposed design package for the South Bioretention Pond has been presented to ODEQ." The reference, ERM 2014b, is missing from the reference list presented in Section 7.0. It is recommended that this discrepancy be addressed.

14. Page 34, Section 5.2.1 -- The evaluation of design storms reference "ERM 2013a" is not included in the reference list presented in Section 7.0. It is recommended that this discrepancy be addressed.
15. Tables, 2, 4, & 5 -- The acronym "PS" should be included in the Notes section of the table. It is unclear what type of sample is being reported with this designation. It is recommended that this discrepancy be addressed.

Appendix E: Previous Source Control Screening Evaluation Results

General Comments

1. The Source Control Screening Evaluation Results presented in Appendix E are difficult to understand because the tables are unorganized and inconsistently formatted. Appendix E starts with Table 5 and includes two versions of Table 2 and two versions of Table 3; Table 1 does not exist. Also, the formatting and shading of exceedances are inconsistent.
2. There should be a consistent system for displaying the data throughout the tables. General table formatting, exceedance highlighting and non-detected values are all displayed differently in Tables 2 (11x17), Table 2 (8.5x11) and Table 5.
3. A renumbering of tables to be in sequential order would make it easier for the reader to give comments associated with the correct table.
4. A description of the weather conditions (i.e., rainfall amounts) associated with the chosen sampling dates should be included in order to understand the representativeness of the samples.

Specific Comment

1. Table 2 (8.5x11), Analytical Results Screening Evaluation Portland Facility Suspended Sediment Sampling -- It is recommended that the dates on which these samples were collected be given. These results indicate many exceedances of metals, butyltins, PAHs and PCBs and reinforces the EPA's concern that overflows from the storm water system will flush contaminated sediments from the storm sewer into the river. It is recommended that a sediment recontamination evaluation for the Vigor Site be completed to evaluate the risks of recontamination.